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ABSTRACT

Some normal and special schools in Portugal were surveyed to test the hypothesis that integration of the handicapped child in normal schools and society is more effective than education in special schools. Data was collected on students' social achievement, psychological adjustment, academic performance, financial costs, family involvement, and therapist and teacher relationship with families. From profiles of eight handicapped children it was concluded that integration is cheaper, socially and psychologically better, and requires fewer technicians, special buildings, and equipment than special schools. (Author/SBH)

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FAMILY INVOLVEMENT MAKES EDUCATION MORE ECONOMIC

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TRAINING OF THE FAMILY FOR OPERANT CONDITIONING

MOTHERS AND THEIR INVOLVEMENT IN THEIR HANDICAPPED CHILDREN'S EDUCATION

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FAMILY INVOLVEMENT MAKES EDUCATION MORE ECONOMIC

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(Summary)

Our basic assumption is: it is much economic and with better performance the education done by the involvement of the handicapped children's family, than the education done exclusively by technicians.

We surveyed some normal and special schools to test our hypothesis and we concluded that our statement is thoroughly right:

- socially the child makes better achievement;
- psychologically the child is more stable and apt to cope with difficulties of the normal life;
- educationally, the child has a better performance;
- financially the burden on education is much lessened;
- the family is much more involved and with less strain than if she was not involved at all;
- the therapists and teachers get more positive reinforcement from the child's parents and relatives.

Financial costs may not exagerate the difference between the special and integrated education, but in our particular survey, we found an enormous discrepancy; although, even if we get a percentage as low as 10% less in the cost of the integrated education when compared with the special one, it is better than nothing, mainly when it is acompanied by other psychological and social gains.

But the performance of the child and her adaptations to the stresses of the world in which she is included, is much better than if she was educated in a special school.

We used the tactic of accepting the child's handicap as the parents want. Then we try to motivate the parents to be co-therapists. This is the most critical phase of the whole process, because as soon as the parents are motivated and accept to act as co-therapists we have only to train them by modelling.

We taught also the parents the simple principles and procedures of operant conditioning, keeping a great emphasis in the timing of the positive reinforcement and in the use of the technique of prompting behavior.

For this purpose we use slides, films and tape recordings from the therapeutic sessions done by the therapists. Sometimes we even let the parents watch the therapists in direct interaction with the child.

As the child betters her performance, the parents are stimulated to work harder and they get reinforcement from this situation.

The therapists diminish their direct work with the children, staying as consultants to the parents and teachers.

We saw also parents very much enthusiasmed as soon as they began to do well this new kind of work.

The response of the classroom teachers is almost similar.

Some parents declare that it would be wonderful if their handicapped child was never educated in a special school.

Some handicapped children which have no performance in special schools, begin to respond well as soon as they drop the special school and are integrated in the normal life and school.

We concluded that with much less therapists, money and equipment than the special school, we can educate more children and in better conditions.

INTRODUCTION

In the information paper "PORTUGAL - integration or special schools?" presented at Oxford, at the Seminar of the International Cerebral Palsy Society (NORONHA & NORONHA, 1976) we had stated that integration of the handicapped children in normal schools and society, seemed to us much better than their education in special schools, because we think that the handicapped children would feel a kind of segregation from the rest of the world and they could not be able to compete with the so called "normal". Besides this, there are other advantages: having an integrated education, there is no need of introduction of the handicapped to the world of the "normals" and specially there is no need of introducing the "normals" into the somehow peculiar world and behavior of the "handicapped". We think that this last statement is very important.

Some handicapped children have a special rictus in their faces; if the "normal" does not know something about cerebral palsy, he might think that the handicapped is teasing him; but if both normal and handicapped are brought up altogether, they will know very well each other without further instructions and will be able to understand each others problems and even help each other.

In spite of all these and many other advantages, we are much more concerned, in this paper, about the economic point of view. All over the world we have special schools which are much more expensive than the normal ones. They range from 8 to 20 times more than the normal schools. Only this makes the special school prohibitive to many subdevelloped countries, and countries that are not fully developed like Portugal and many other european territories.

In the paper for lecturing aid "Integração: um ano de experiência", NORONHA and NORONHA, 1976 b) we think that we highlighted the point of view of the parents who had their children in special schools and moved them into integrated education. Within the 7 cases described in the paper, one mother exclaimed: "How wonderful if my son had been always in a normal school!".

ECONOMIC POINT OF VIEW

Taking the social and psychological advantages as granted, we will hang over the financial problems. As there is a great discrepancy in the wages among the different countries, we will limit ourselves to the time spent by the technicians and non-technicians with the education of each child.

We will present this study in the following way:

- let us suppose that to educate 100 normal children, 6 teachers spend 22 hours each week and that there are also 2 administrative and auxiliary people working 40 hours each week; each child will have a rate of 2.12 hours of interaction for his education

  (6 x 22 + 2 x 40) : 100 = 2.12

- to educate 10 handicapped children, 5 technicians altogether spend 100 hours a week and 1 administrative or auxiliary personnel spend 40 hours; each child will have the rate of 14 hours for his education.

Using this kind of figures, let us begin to know what are the real figures that we have in Portugal in the different educational settings.

We think that in the other countries there will be not much discrepancies related to what we have found.

In the normal primary school usually we can have, in most of them, the following, for the four primary classes:

- 24 classes of 25 pupils each;
- 24 teachers working 25 hours each week;
- 6 administrative and auxiliary people working 36 hours a week.

So, 600 pupils get 816 hours of teachers and other school people's attention each week. Dividing the 816 hours by 600 pupils, each one has 1.36 hours of interaction time per week.

In the normal secondary junior school, we have usually the following for the 5 years after the primary school:

- 1686 pupils divided into 53 classes;
- 91 teachers with the following working hours:

2 teachers working 25 hours: 50 ; 7 teachers working 24 hours: 168
28 teachers working 23 hours: 644 ; 45 teachers working 22 hours: 990
3 teachers working 21 hours: 63 ; 6 teachers working 20 hours: 120
totalling 2035 hours;

- 7 administrative clerks working 36 hours a week, summing up 252 hours;
- 20 auxiliary people working 40 hours a week, totalling 800 hours.

So, we have 3087 hours of weekly work in benefit of 1686 pupils which have a rate of 1.83 hours of interaction each week.

In the seven cases described in the papers "PORTUGAL, integration or special schools?" and "Integração: um ano de experiência", we have to add to the normal secondary school rate the ammount of time spent in the integration.

We have now the rate of 4 hours/pupil/week for the integration, to be summed to the normal education rate. So the mean integration rate is: 1.83 + 4.o = 5.83. This includes also the time spent in travelling from one school to another by the integration consultant visiting teacher.

To specify better:

	Normal +	Integration =	Total
1st case (Cardoso)	1.83	4.5	6.33
2nd case (Arnaldo)	1.83	6.5	8.33 *
3rd case (Paulo)	1.83	4.5	6.33
4th case (Prata)	1.83	5.o	6.83
5th case (Isabel)	1.83	5.5	7.33
6th case (Fernando)	1.36	0.5	1.86 *
7th case (Jorge)	1.83	1.o	2.83

* We see here that the highest rate for integration was 8.33 and the lowest 1.86, depending on the severity of the handicap, intelectual functioning of the pupil and teachers acceptance of the experts help and advice.

We tried also to know about the costs of special schools.

The special education unit MIRA-SINTRA which admits children with light handicaps within the range of 10 to 22 years, has 56 children and the following education, administrative and auxiliary people to run this day school:

- 2 psychologists working 35 hours a week 70
- 13 technicians which work on education, psychomotricity, visual and hand crafts, 25 hours a week 325
- 1 administrative clerk working 35 hours a week 35
- 10 auxiliary people working 40 hours a week 400

Having the sum of 830 hours for the education of 56 children, we find the rate of 14.82 hours per child each week.

We also visited a school for autistic children, where 17 autistic children are supported technically by:

- 1 craftsmaster working 25 hours a week 25
- 7 educators and ocupational therapists working 20 hours a week . 140
- 5 auxiliary people working 40 hours a week 200
- 1 music teacher 16
- 1 physical education teacher 10
- 3 administrative clerks working 30 hours a week 90
- 1 accountant 10
- 1 pediatrician 2
- 1 psychiatrist 8

This sums up the amount of 501 hours to handle 17 children which gives the rate of 29.41 hours per child each week.

We can see also one case of education of a handicapped child (Noronha, 1978) in the article "Deficiência e condicionamento operante", where a psychologist alone, working directly with the child at her home and without attending any class, could get much better results than in the former 3 years which the child spent in a very well equipped special school.

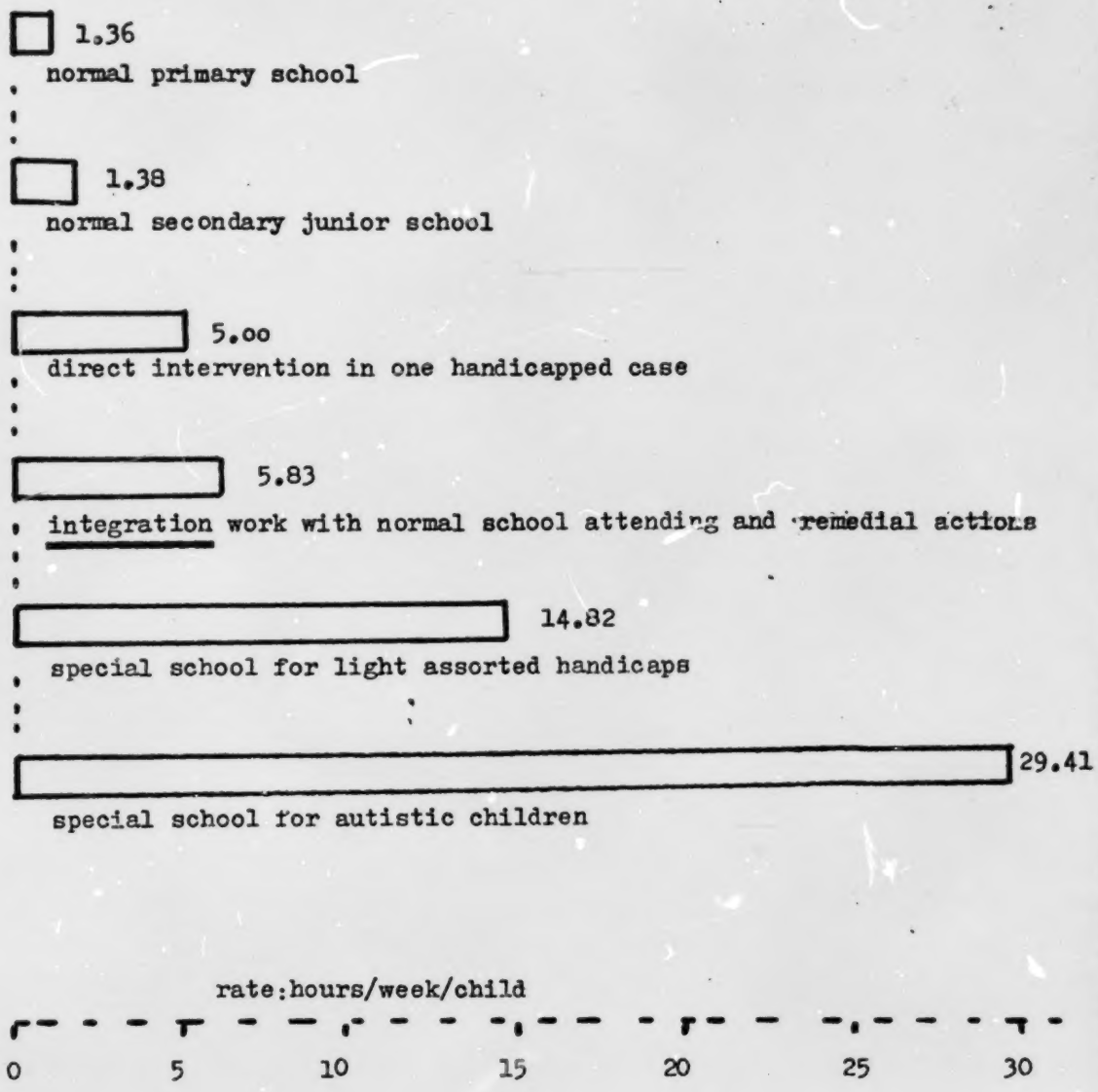
In this case, which will be presented at the seminar in another paper, the psychologist spent 70 hours in the first 27 weeks and 90 hours in the last 5 weeks together with the integration teacher to socialize the child and make her able to live and play with other children without hurting them as used to be until then.

The child was also compelled to build new behaviors such as to greet other people, to play on a slide 3 meters high, to move alone in the swing, to be quietly sitting for more than an hour, to run, to throw a ball over the net, to do some psychomotricity exercises correctly, etc..

In the first 27 weeks the psychologist maintained alone a rate of 2.6 hours while during the next 13 weeks the rate went up to 5 and in the last 5 weeks the rate was 18 with the colaboration of the integration teacher. The medium rate was 5, dividing the total amount of 225 hours per 45 weeks.

With this survey we see the following rates technicians/pupils/hours/week

special school for autistic children	29,41	hours
special school for different light handicaps	14.82	"
integration (normal + remedial)	5.83	"
direct intervention in one handicapped case	5.00	"
junior secondary school (normal)	1.83	"
primary school (normal)	1.36	"



Through the diagram we can visualize the cost we have to support in different type of education. If we see that there are other advantages besides the economical one, why not channel our efforts to use this type of education instead of insisting in the conventional type special schools we are already using?

This thesis could be supported with more evidences and with evidences of more handicapped children, if the government authorities had given some support. This lack of support, did not give us a chance to prove what we wanted to prove in 6 months intensive work with severely handicapped children (mongoloid, brain dammaged, etc.). But this work can be done in countries where the local authorities and even private institutions raise funds for this purpose.

What will happen with severely handicapped children, specially with extremely subnormal intelectual functioning we do not know, but we expect that the rate will not go to more than double of the integration nor will be more than half of the special schools like the autistic one.

CASE DISCUSSION

Let us see a little about the work already done.

The integration work was done during the academic year 1975/76.

We made the follow-up of all the seven cases, besides the single case of direct intervention.

In all but one case (Prata), we saw success.

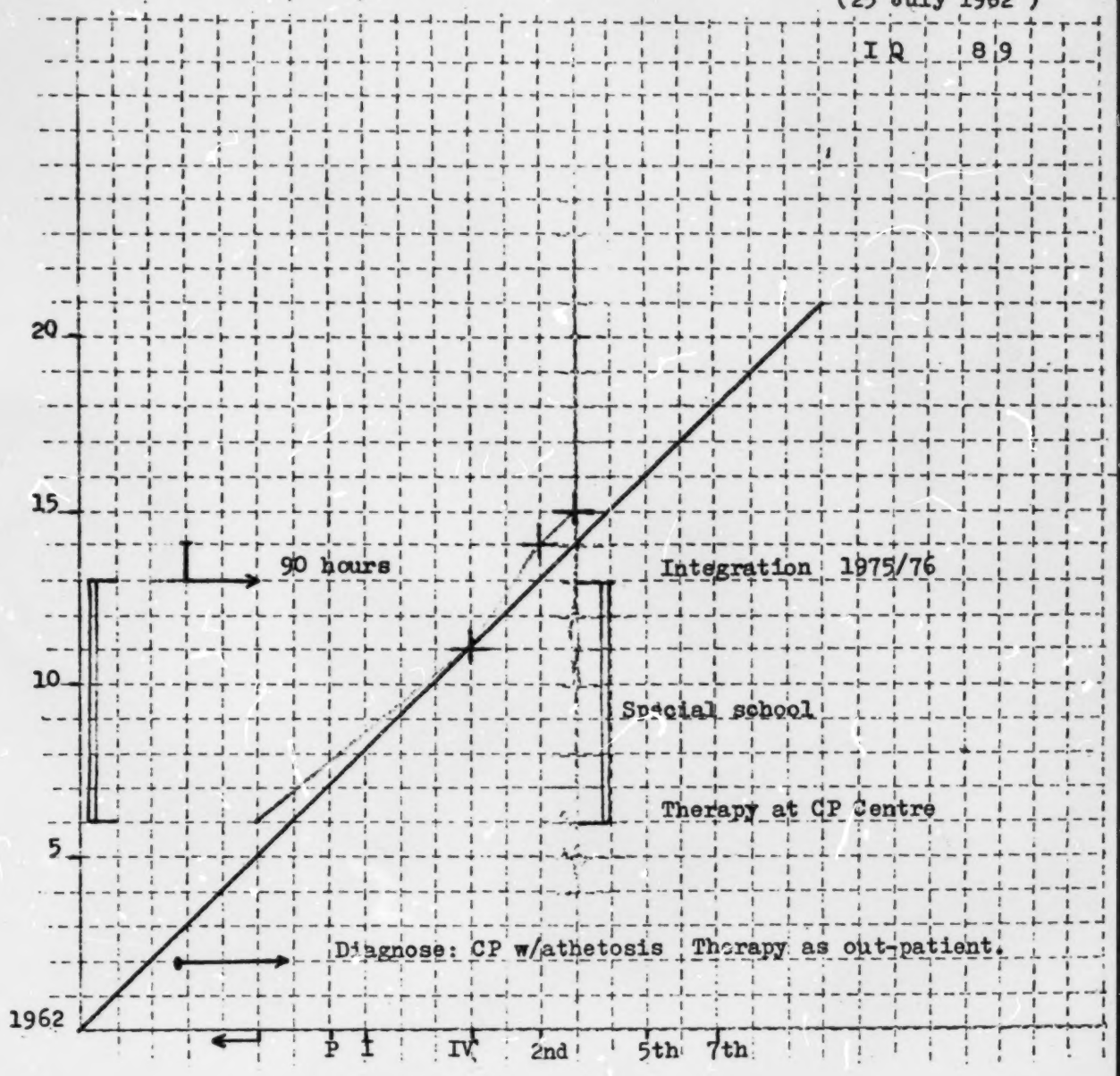
In the following diagrams we see that the child educated in a special school, needs support as soon as he moves for a normal setting.

In the following diagrams the letter P indicates the end of pre-school, the number I the end of the primary first class and the number IV the end of the fourth class, while de number 2nd indicates the end of the second year in a junior secondary school. The number 5th indicates the end of the fifth year after the primary school (3rd year in the senior secondary school) and the number 7th indicates the end of the preuniversity, seven years after the end of the primary school.

We have also the age from 0 to 20 years, and a short story of the child, his academic achievement and therapy.

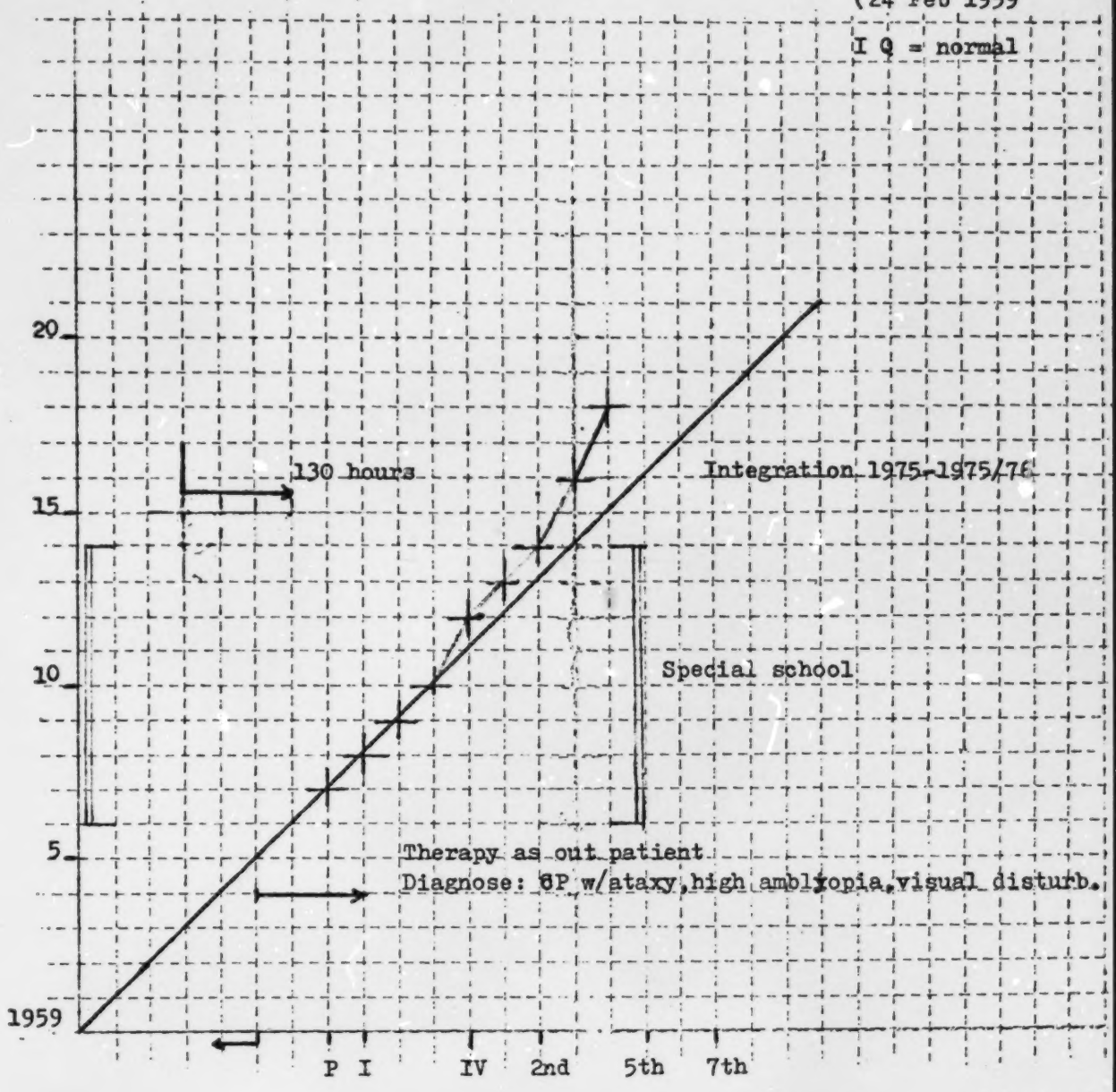
Data / Oct /1975 ; / June / 1976 . Código: Cardoso

(25 July 1962)



OBSERVAÇÕES: Premature baby (7 months). Diagnosed CP with athetosis at two. Therapy as out patient until six. In a special school (CP Centre) since six until thirteen where he passed the 1st year of the junior secondary school. About 90 hours of integration, work with mother, teachers and the child, in the academic year 1975/76. Now he is again with some difficulties because he has no support of any kind, since the end of the academic year 1975/76. Nevertheless he performs well.

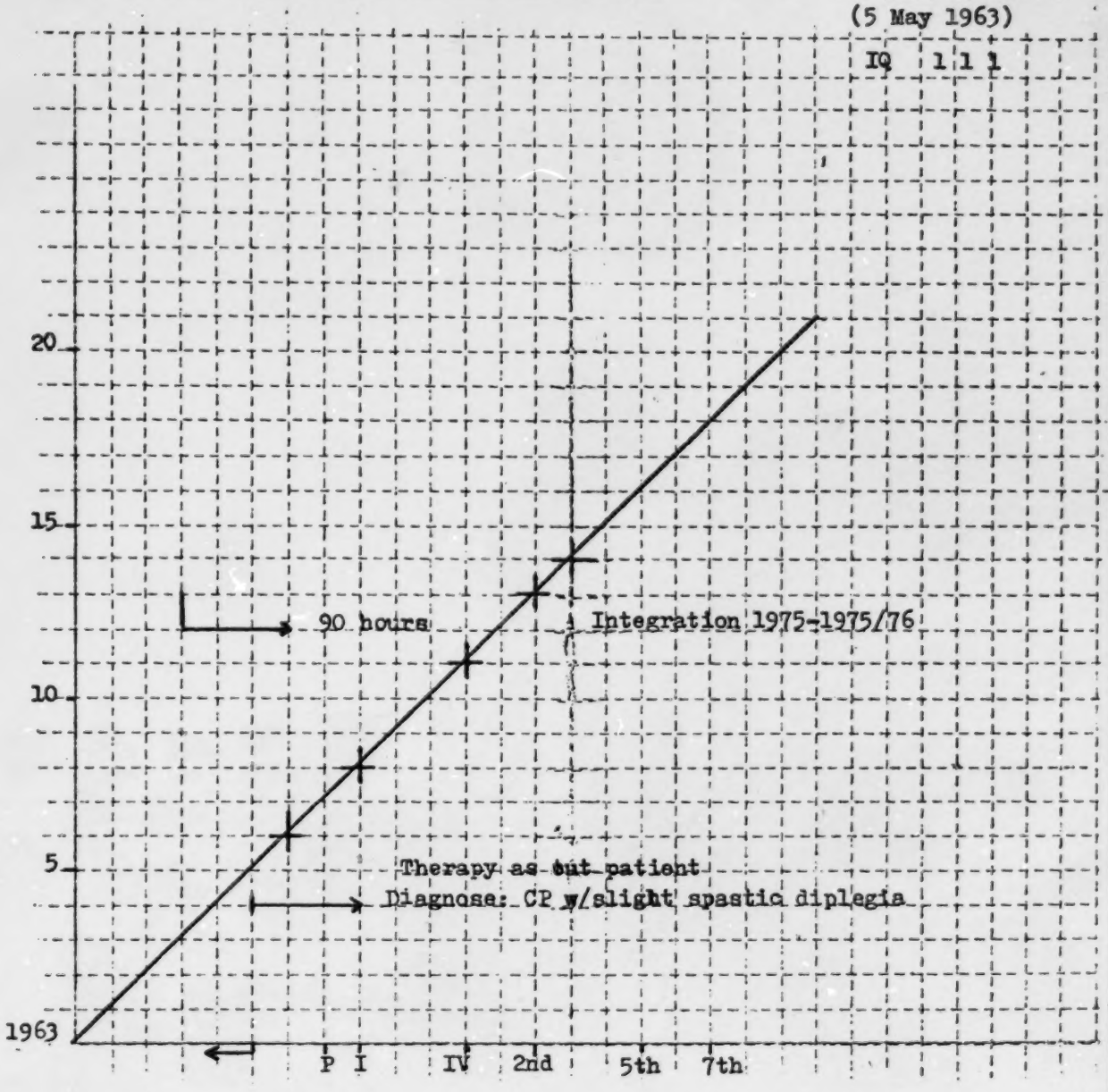
Data / Jan /1975; / Oct /1976 Código: Arnaldo
(24 Feb 1959



OBSERVAÇÕES: Diagnosed CP with ataxy and high ambplyopia with other visual disturbances; at the age of four began physiotherapy and speech therapy. From six to fourteen at a school for CP children. At fourteen began to attend a normal high school having difficulties and with need of support. About 130 hours of work in integration were needed to help the child, their parents who cooperated well and the teachers.

Data / Jan /1975; / June /1976. Código: Paulo

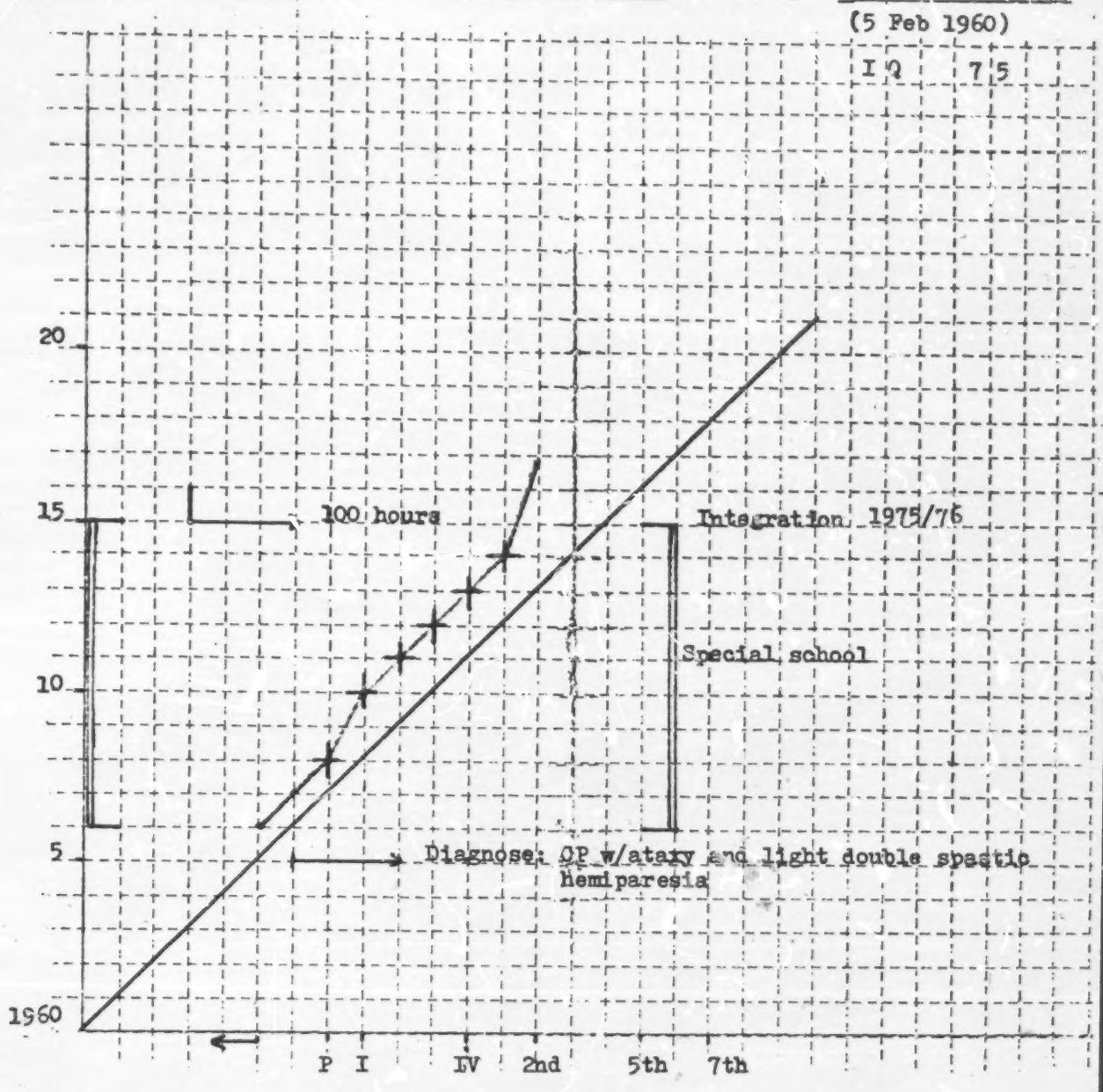
(5 May 1963)



OBSERVAÇÕES: Born aparently dead, with anoxia, after 19 hours of delivery.
At four, diagnose of CP with light spastic diplegia.
At five, pre-school suplemented by psysiotherapy and speech therapy.
About 90 hours spent by the teacher in the integration, working with the child, their teachers and parents, specially mother who is very anxious.
The child is still performing well although with no support.

Data / Oct /1975; / June /1976. Código: Prata

(5 Feb 1960)



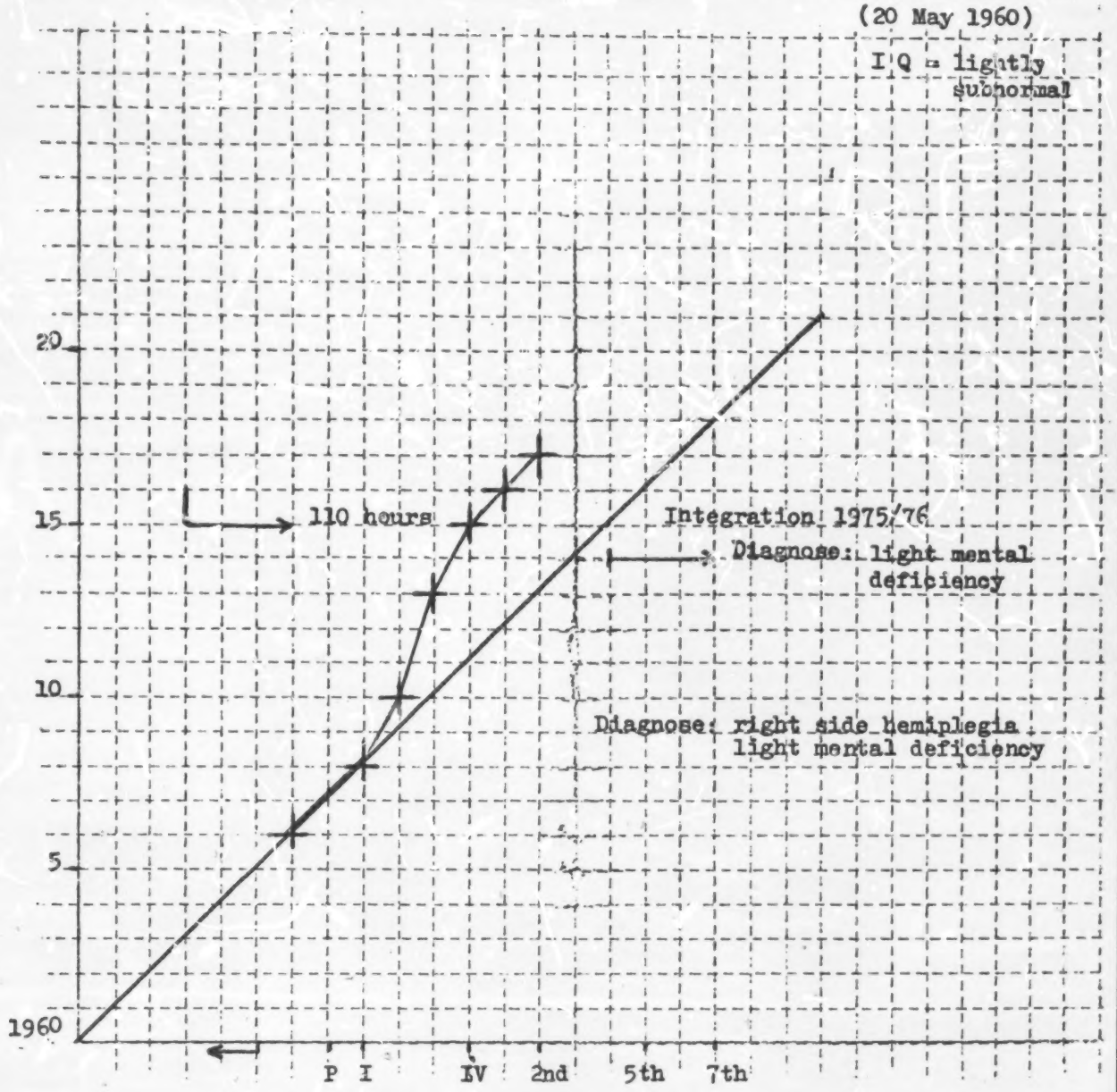
OBSERVAÇÕES: Bad delivery with the use of forceps and delay of 19 hours. The baby could not hold his head straight in the first months of life. Only at the age of five was diagnosed CP with ataxy. He suffers also from strabism and high miopia.

In special school, since six until fourteen. As soon as he joined a normal high school he began to fail.

At home, he has also negative motivations, specially from his mother who does not believe on his ability for academic achievement. About 100 hours of integration were spent with the teachers and the child. The family did not cooperate and the child failed. He is motivated to do some hand work.

Data / Oct /1975; / Jan /1976. Código: Isabel

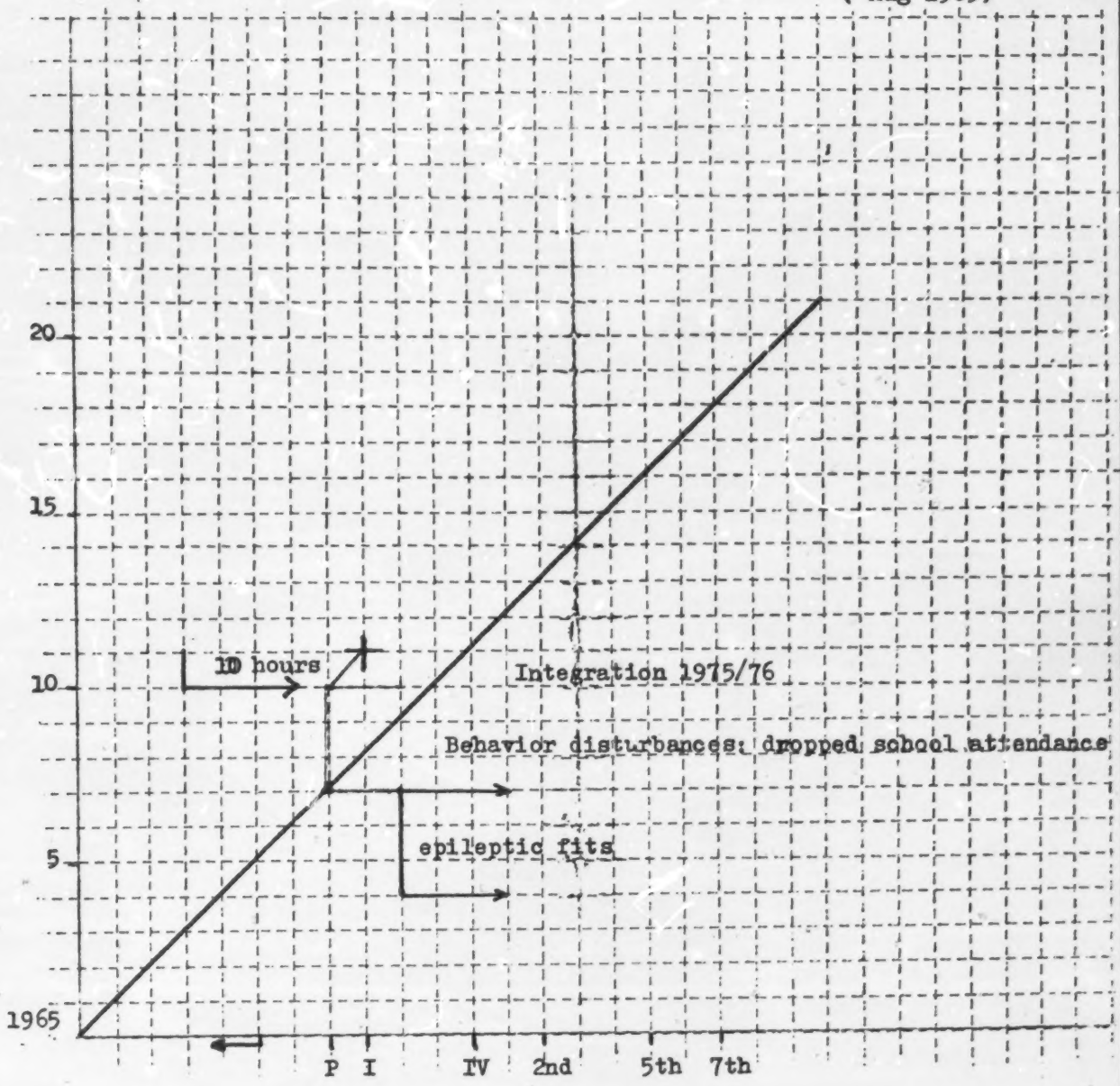
(20 May 1960)



OBSERVAÇÕES: Began school attendance at the age of five, where she performed well. Since seven she began to have many difficulties in a primary school. At nine, right hemiplegia with light mental subnormality was diagnosed. Her premature birth after seven months of pregnancy, was in a stressful family situation and without any medical care. At four, she could not move her right limbs and later she was treated with chemo and electroconvulsive therapy. Her right limbs are shorter than the left ones. The family life is very stressful with many misunderstanding between her parents.

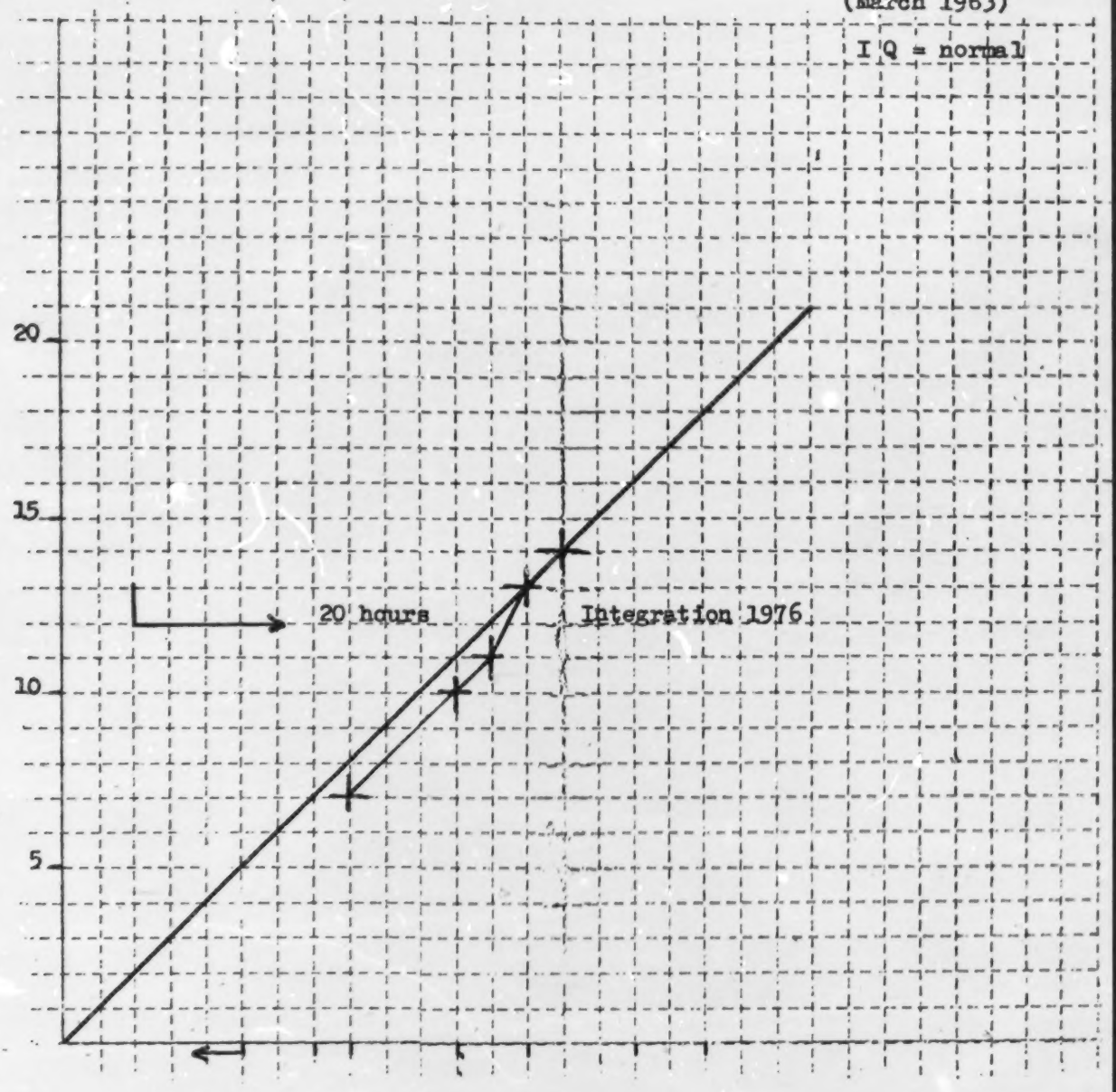
About 110 hours of work were spent with the child, the family and the teachers, with good results. She has no support since the end of the academic year 1975/76, but has performed well until now. At the moment she is beginning to have some difficulties.

Data ___/ Oct /1975; ___/ June /1976. Código: Fernando
(Aug 1965)



OBSERVAÇOES: Fernando is a boy who suffered epileptic fits since the age of four until seven. At this time, he entered a primary school which he had to drop because of his behavior disturbances and misbehavior. Three years later, the integration teacher helped him, the mother and the teacher who accepted the child in her classroom on trial. After two weeks trial, the child joined definitely the class and passed the first class of the primary school.
The integration teacher spent about 10 hours during the whole academic year.
The child is now in the 3rd year of the primary school.
The mother with whom he is living, has speech and hearing defects. His father is an emigrant and stays out of home almost the whole year.

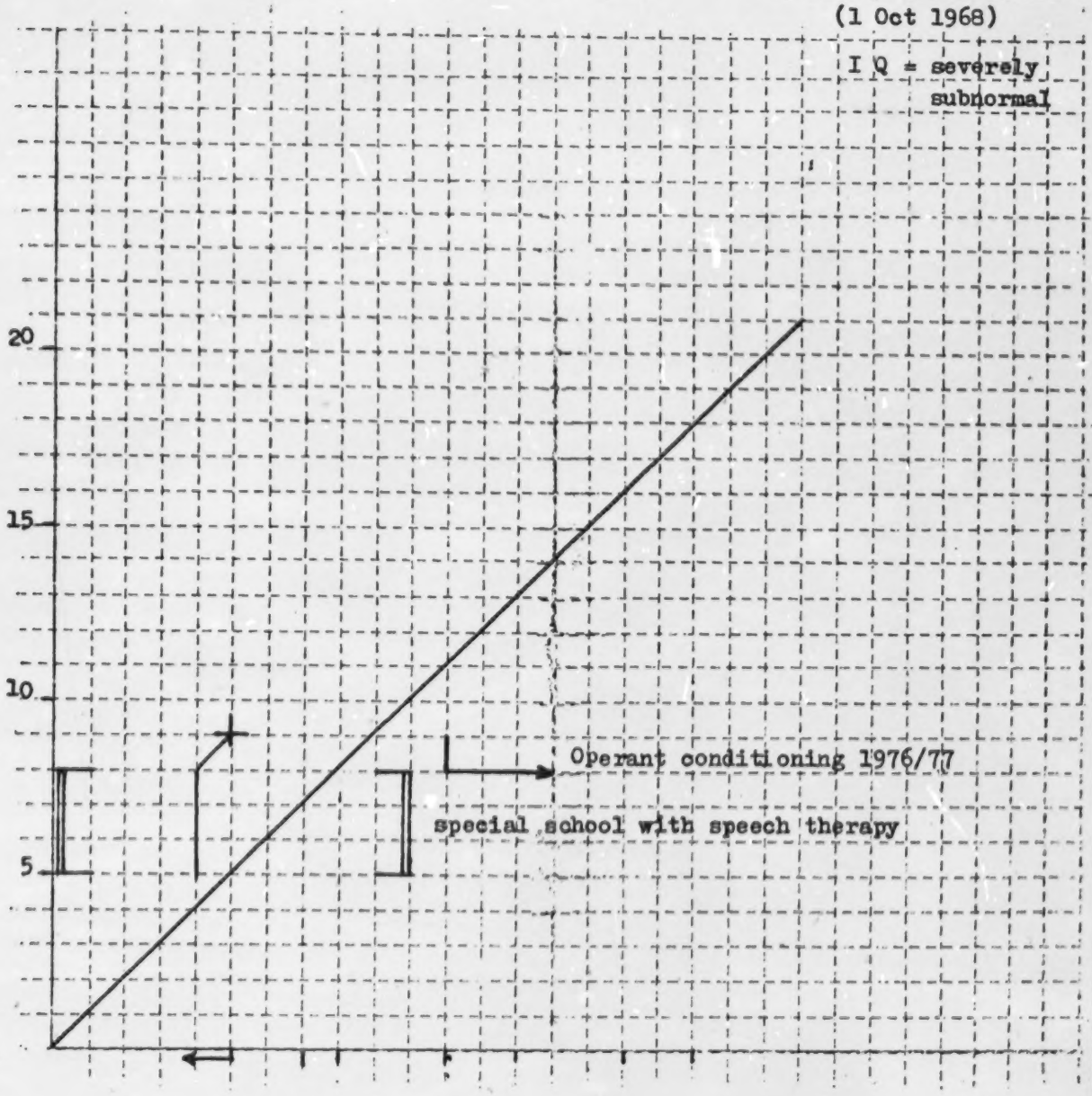
Data ____/ Jan /1976; ____/ June /1976 Código: Jorge
(March 1963)



OBSERVAÇOES: Jorge was a good pupil until the end of the primary school. When he joined the junior secondary school, he began to be misattentive and disruptive. The parents consulted a psychiatrist who recomended him to join a school of handwork training.

As soon as the psychologist and the integration teacher began to work on behavior modification with the mother, teachers and the child, this one began to respond well in the academic work. He is performing well until now. The parents are very anxious about the future of this only child of theirs.

Data / Nov / 1976 / Sep / 1977. Código: Álvaro
(1 Oct 1968)



OBSERVAÇÕES: Premature baby (7 months) born with breathing disturbances. He was 45 days in the incubator. Developmental difficulties.

From five to eigth years in a special school with speech therapy. The teachers said that he would not cooperate and did not admit him in the year 1976/77.

The psychologist alone, first, and with the integration teacher after, began to try operant conditioning, with the help and training of his parents by modelling. Very good performance in the 45 weeks of direct intervention.

The child is prepared to enter a normal pre-school with integration help for the teacher, parents and the child. No integration teachers may be available for this work.

More details are given in the paper: "Training of the family for operant conditioning" which will be presented at a seminar.

CONCLUSION

In all these eight diagrams we see the educational evolution of 8 handicapped children. They had integration support for only one year.

The diagonal line shows the direction of the normal education. The children with difficulties stay in the upper portion while those which are clever stay in the lower portion, with reference to the diagonal line.

We see clearly that as soon as the child leaves the special school, faces many difficulties and lowers her capacity of study.

If the child is always educated in normal schools, maintains the initial heading specially if she has some support from the integration experts.

With these figures and ideas in mind, we see that integration is cheaper, socially and psychologically better, requires less technicians, special buildings and equipment than the special schools.

It requires only more intelectual ability, capacity of good interpersonal relation, emotional stability and strongly motivated technicians who are bound to such commitment.

So, money is the least thing we need for INTEGRATION which is better than SPECIAL SCHOOL.

And this is definitely a challenge to countries which are not yet developed or those which are still underdeveloped.

The soon the INTEGRATION begins and the soon the child begins to be helped, the better.

World Congress on Future Special Education
Stirling, Scotland, June 25 - July 1, 1978

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See also:" Mothers and their involvement in their handicapped children's education."
and " Training of the family for operant conditioning."

MOTHERS AND THEIR INVOLVEMENT IN THEIR HANDICAPPED CHILDREN'S EDUCATION

Zélia Elisabeth Feliciano de Noronha
secondary school integration teacher

(Summary)

Mother's involvement in children education is always of extraordinary importance and very specially if the children are handicapped ones.

Two cases will be reported.

Cardoso, a cerebral palsy child, after having studied for six years in a special school, was integrated in a secondary normal school to continue his studies.

He had never walked alone through streets because the school bus took him every day from home to school and whenever he went for a walk, he was always hand in hand with his mother.

Now, integrated in a normal secondary school, everything was different. As he lived very near his new school, he had to go on foot for 10 minutes. At first, his mother took him with her everyday, held his satchel and on arriving at school she went upstairs with him because this was another of his great "fears": to go upstairs alone.

At the end of 4 months, after hard work with the child's mother and receiving from her a good colaboration, Cardoso could walk by himself to school and go alone upstairs.

The second case is about a boy called Jorge, with behavior problems, while studying the second form at a secondary school.

He was the only child in the family and his behavior has indesirable at home and school.

Despite his mother recomended him to study at every moment and his parents used to spank him almost everyday, he didn't study properly.

His mother, really bothered about her only child, decided to ask help from an integration teacher about this problem and was advised to consult also a psychologist working in behavior modification.

The integration teacher and the psychologist were both interested in this case, and at the end of 6 months, after some therapy sessions with the child and his mother, besides some meetings with Jorge's teachers, the boy changed his behavior and began to get success in his studies.

The mother was trained to give positive reinforcement to the boy when he used to study alone. She was trained also to help him in scheduling a time-table for the day or for a whole week.

The teachers were also instructed to give positive reinforcement.

In all the cases it was necessary to instruct people to give positive reinforcement in due time and the integration visiting teacher had to plan a desensitization or a shapping or modelling programme, leaving the execution of this work to the mothers or other teachers.

All cases were much similar to these two, and as soon as the mothers began to act with motivation, the success was almost sure.

In only one case we had a total rejection from the mother and the child failed to pass the examination and gain some performance in his studies.

MOTHERS AND THEIR INVOLVEMENT IN THEIR HANDICAPPED CHILDREN'S EDUCATION

To integrate handicapped children who attended a spetial school for 8 or more years, in a normal school, is not an easy task not only for their teachers and parents but also and mainly for the children. When they change from a special school to a normal one, they begin to live a new life, a real life and to know their own society. To make this change successful, it is necessary a good support for the children, because they need to be accepted by other people and to learn how to accept them. This "support" must be done by parents and teachers.

The success of an "integration" depends mainly on the integration teacher's interaction with the children's parents and teachers.

The involvement of the family, specially mother's, is no doubt a very important "support" to help the handicapped children in their new life to face their real world, because mothers can comunicate self-confidence and security through their tenderness, understanding and good interaction.

Let us see for example two different cases which show us the importance of this involvement.

Cardoso was a premature baby. When he was 6 or 8 months old, he was not able to sit or to hold his head straight.

At the age of two years, after having consulted general practitioners and pediatricians, he went to a Cerebral Palsy Centre and the diagnosis was: "cerebral palsy with athetosis".

He began to benefit from physiotherapy and at the age of six he began to attend a CP Centre where he studied and was trained until June 1975.

At this time, Cardoso was integrated in a junior secondary school. In spite of being a nice and clever boy, he had some speech, hearing and balance difficulties.

When he entered his new school, he had no self-confidence and was too much dependent on his mother.

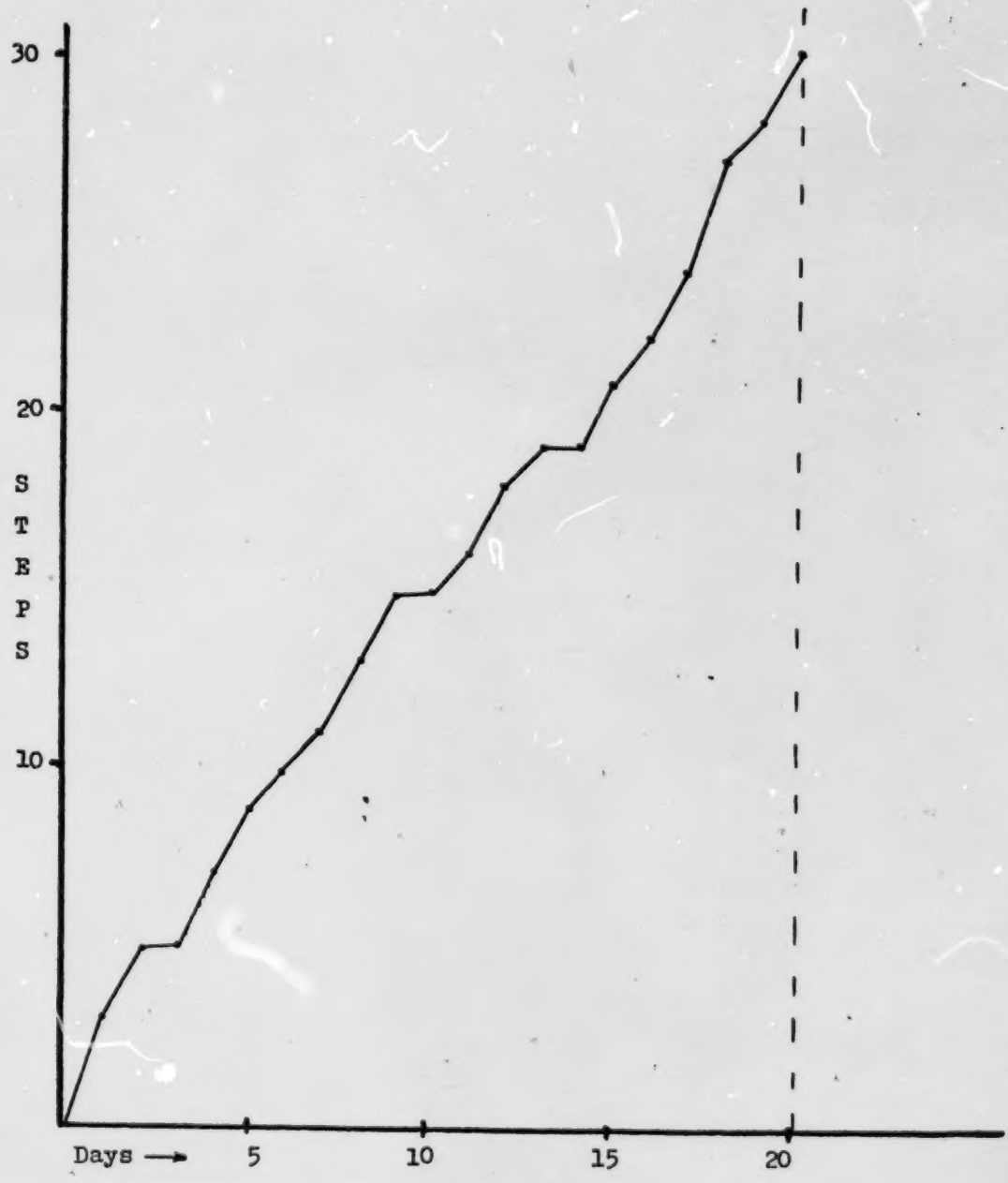
As it was difficult for him to go upstairs or to walk alone along the streets, he received his mother's help at every moment.

Cardoso was then, thirteen years old; it was necessary and good for him not to depend on his mother everyday and at every moment. To help him, we had to make his mother understand that he should be an independent boy

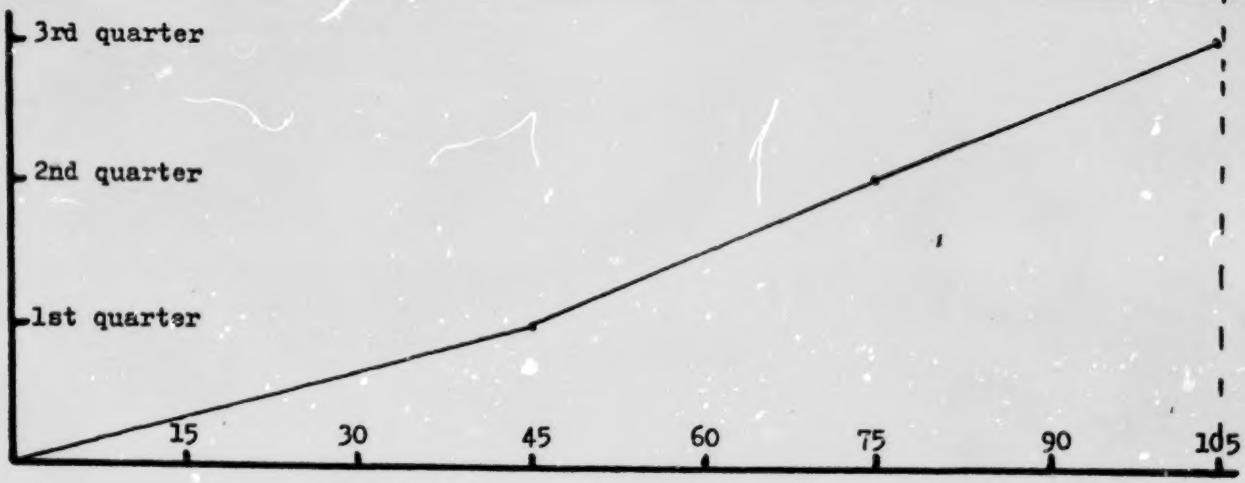
and walk by himself along the street. To achieve this, the integration teacher used the technique of progressive desensitization.

In the diagrams we will see, the progress in achieving the required goals was the following:

- 20 days to climb 30 stairs by himself;
- 105 days to walk alone on the street along three residential quarters, from home to the school.



Progress in going upstairs alone



Progress in walking alone along the street

At the end of 4 months, after hard work with the child's mother, who colaborated very much with us, Cardoso could go with security and self-confidence upstairs and walk by himself along the street.

Meanwhile, the teachers were sensitized to the child's difficulties and instead of being successful only during the year of the integration support, he was and has been successful in his studies until now.

At the end of the school year, Cardoso's mother said: "It would be wonderful if my son had been always in a normal school!".

This year however, in spite of being successful in his studies, this child has some difficulties because he was moved to another secondary school; his collegues are different and his teachers are not sensitized to his difficulties.

Jorge, 13 years old, was referred for integration because of his behavior problems and lack of success in his studies.

He was the only child in the family and after having behaved properly and studied well until the age of eleven, he began to fail and to have misbehaviors at home and school.

His mother asked help from a psychiatrist who having consulted the child for several times, advised to drop the junior secondary school and join a school of handwork; the psychiatrist told the mother that the child would not have intelectual ability to pass the secondary school.

Soon after, the mother asked the help of the Ministry of Education and was referred to the integration teacher, not only because he was not

able to cope with his studies but also because he used to disturb the class joining a gang of pre-delinquents.

The integration teacher advised the mother to move him to another school and began to plan with a psychologist how to modify the child's behavior.

The teachers were asked to reinforce him as soon as he had a good behavior.

The mother was advised not to compell him to study.

The child was stimulated to make a time-table and to accomplish it. The schedule of time began to include more home working hours and less play time.

The child was reinforced when was able to accomplish the time-table.

He began to raise his class marks and so the parents were reinforced.

The mother was trained to help him in scheduling a time-table for the day or for a whole week and to give him positive reinforcement whenever it was possible.

The father had no need of spanking him as he did formerly and the mother began to be less anxious.

The teachers were also sensitized to this case and began to be reinforced by the good marks gained by the child.

This case was peculiarly a hard case and the greatest difficulty was the resistance to change, found in the parents and teachers. Only after getting the first reinforcements through the change of the child's behavior, they began to cooperate better.

The techniques used were essentially prompting behavior, shapping and modelling.

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TRAINING OF THE FAMILY FOR OPERANT CONDITIONING

Mário de Noronha
consultant psychologist

(summary)

During these last years we have experienced to teach children with a different degree of intelectual ability and handicap.

The children rated from IQ 50 to IQ 112 in the WISC scales.

The handicaps were of intelectual functioning, motor impairment, difficulty in word pronounciation, spatial orientation disorders, etc..

We noted that all the families were specially upset because of the handicap they had to cope with.

The best strategy we could use was first of all to accept that the child was more handicapped than it really was and as handicapped as the parents thought she was.

The second thing to do was to motivate in various forms the parents to join us in the therapy procedure.

As soon as we could see the parents motivated we could teach them by modelling how to help us in the therapeutic procedure.

We teach specially to use the simple reinforcement either primary or secondary. They have to train very much to use the reinforcement in the correct time specially when we are using the technique of shapping or prompting behavior.

The foremost difficulty we had in this type of work was the mother's anxiety. They think that the child will not be able to surpass any difficult situation and sometimes the child performs well without her parents and acts with less performance as the parents get into the therapy.

The main work is sometimes with the parents.

In this form of therapeutic situation we had opportunity to use the mothers as behavior therapists and speech therapists working with handicapped children either with normal or subnormal intelectual functioning.

The parents, when motivated, use to be very good co-therapists despite their basic education or academic level be somewhat low.

The gains obtained by the child were presented as consequences of the parents activity.

As soon as the parents were involved in the case, they tried to go on harder and harder and the therapist could retreat slowly from the therapeutic situation continuing only as an adviser.

Sometimes the teachers were also kept into this situation.

The most difficult thing is to motivate the parents to act as co-therapists because they do not want to alter their old habits which reinforce positively the handicap.

As psicologist, I feel this behavior as neurotic, just like the behavior of people who get reinforcement within the situation and, even saying the opposite, do not want to get any therapeutic help.

TRAINING OF THE FAMILY FOR OPERANT CONDITIONING

Álvaro, a nine years old boy, with intelectual handicap and behavior problems, was not admitted in any special school in the academic year 1976/77.

The child had about 3 years of mental age and about 5 years in psychomotor coordination.

His foremost difficulties were:

- pronounciation of specific sounds and words;
- hand grasp;
- hiperactivity;
- psychomotor coordination;
- knowlegde of corporal scheme and laterality;
- behavior problems;
- subnormal intelectual ability.

He was a 7 months premature baby, born with breathing defficiencies and gastric difficulties. He was kept for 45 days in an incubator.

He had many difficulties during his development and at five he went to a very well equipped special school with speech therapy, where he stayed until the age of eight. We think that the child instead of learning something to develop duly her personality, began with such a strong regression that the special school did not want to admit him next year.

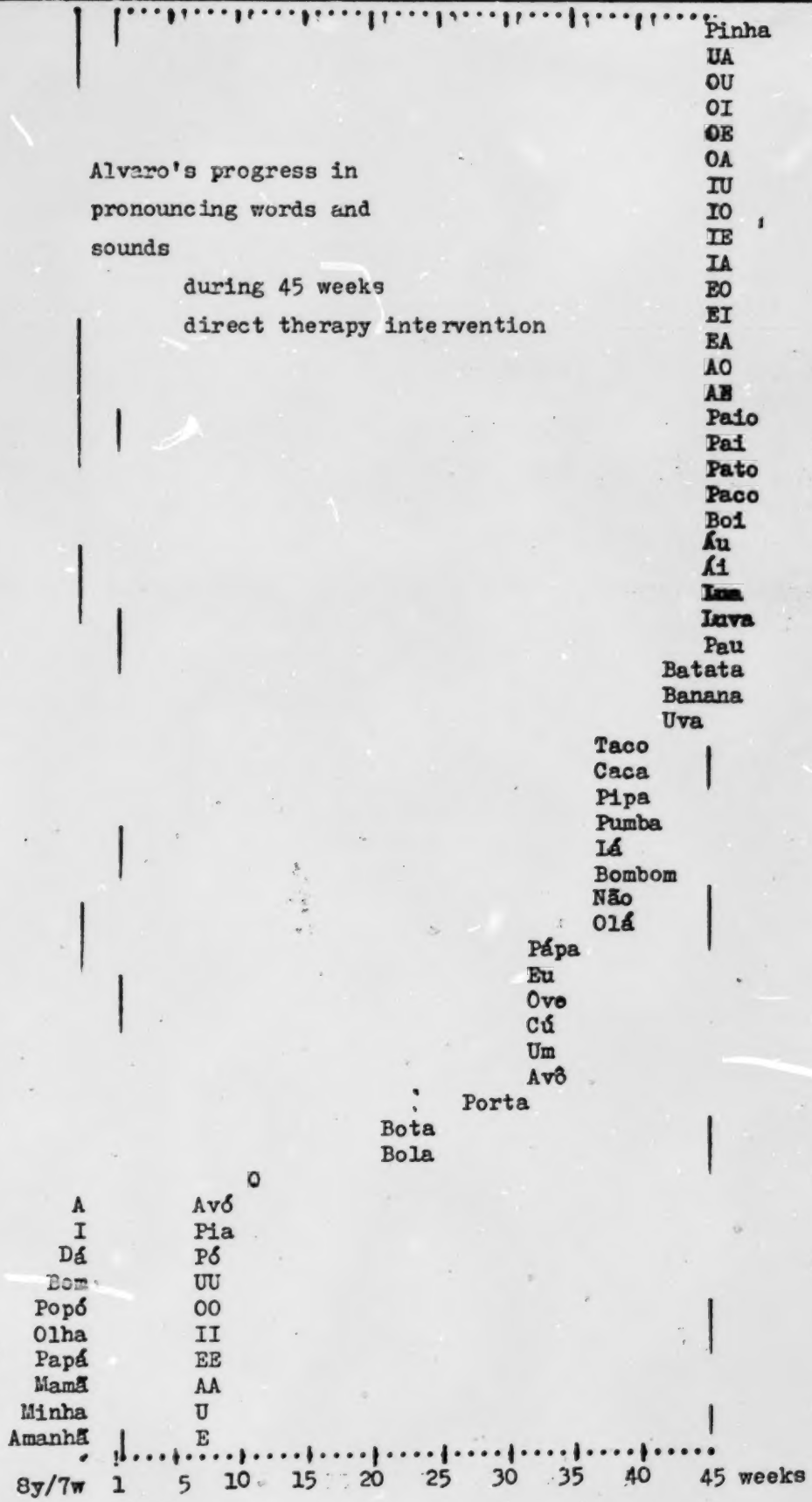
After having been observed the child's behavior at home and with the surrounding people, the psychologist began to work with the child "prompting" any kind of "good behavior". Meanwhile he was encouraged to pronounce sounds and words.

The parents, and specially the father was instructed by modelling (observing the psychologist) to stimulate the child to talk and behave well. Will see in two separate sheets the progresses done by Álvaro during the 45 weeks of therapy he was submited.

The first sheet shows the week since when the child was able to pronounce correctly the word or sound.

On the second sheet, the behaviors described were built since the week where the dot is allocated.

On both sheets are mentioned only the words and behaviors which the child manages well and no mention is made to words and behaviors that are not completely manageable by the child.


Alvaro's progress in
pronouncing words and
sounds
during 45 weeks
direct therapy intervention
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Pápa
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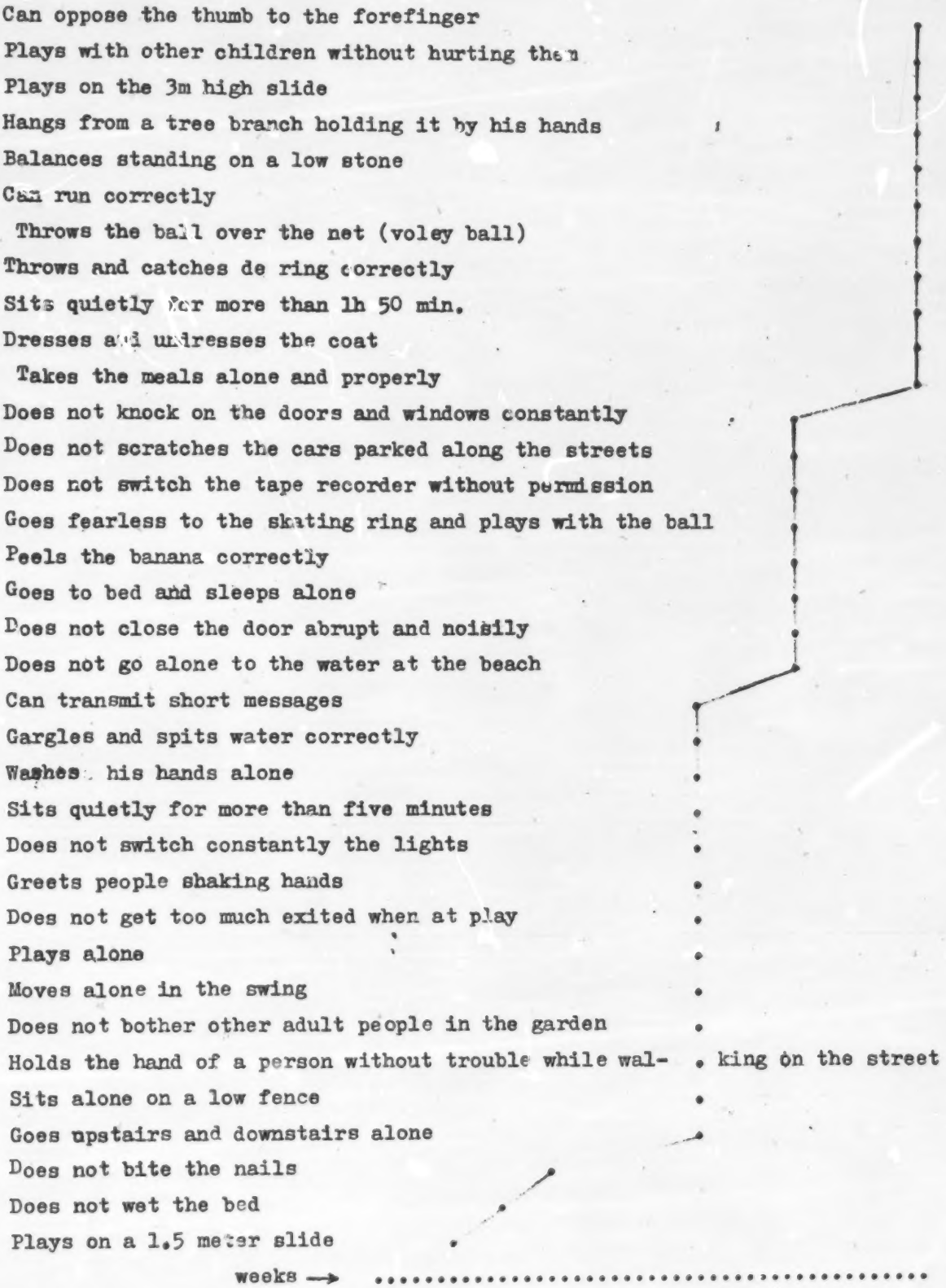
40
45 weeks

Alvaro's progress in the behaviors

weeks of therapy → 10 20 30 45


Can oppose the thumb to the forefinger
Plays with other children without hurting them
Plays on the 3m high slide
Hangs from a tree branch holding it by his hands
Balances standing on a low stone
Can run correctly
Throws the ball over the net (voley ball)
Throws and catches de ring correctly
Sits quietly for more than 1h 50 min.
Dresses and undresses the coat
Takes the meals alone and properly
Does not knock on the doors and windows constantly
Does not scratches the cars parked along the streets
Does not switch the tape recorder without permission
Goes fearless to the skating ring and plays with the ball
Peels the banana correctly
Goes to bed and sleeps alone
Does not close the door abrupt and noisily
Does not go alone to the water at the beach
Can transmit short messages
Gargles and spits water correctly
Washes his hands alone
Sits quietly for more than five minutes
Does not switch constantly the lights
Greets people shaking hands
Does not get too much exited when at play
Plays alone
Moves alone in the swing
Does not bother other adult people in the garden
Holds the hand of a person without trouble while walking on the street
Sits alone on a low fence
Goes upstairs and downstairs alone
Does not bite the nails
Does not wet the bed
Plays on a 1.5 meter slide
weeks →

The dot indicates the week during which the child began to have the proper behavior that he was not able to do before.

The child was shown a figure through a slides projector and was stimulated to say the name of the picture receiving reinforcement as soon as he could pronounce similar to the correct pronounciation.

During all the day, many times the child had to listen to 30 minutes cassete where the psychologist had recorded many correct pronounciations of some words which were meant to be learned by the child.

After some weeks, when the child began to pronounce the new sounds and words, the projection of slides was stopped but the cassete recordings was continued until the end of therapy. New recordings were made with the correct pronounciations of the child.

He could do some weeks after psychomotor exercises by modelling done with other children; to lie completely on the floor, walk on fours, lean the face against the carpet, raise and drop the arms, move the legs as marching, and many other psychomotor coordinated behaviors, were extremely difficult for him. The child learned all this by observation and shapping.

Some of the sessions were filmed or photographed and others were tape recorded and, besides some ideas about operant conditioning, the parents were taught to shape the child's behavior.

The parents worked with the child more time than the psychologist.

Having seen a great progress of the child, the psychologist decided to model two children, a girl aged 13 and a boy aged 15 to work with the handicapped. The results were better than with the parents.

We saw that the parents were not always able to wait the accomplishment of a task to give reinforcement. For example, the child used to ask for food saying "hum, hum" and pointing to what she wanted, with the parents while with the psychologist and the other children she used to say "pápa" (a word that means food for children). The parents would not wait and make the child say "pápa". After this, some wrong behaviors were positively reinforced by the parents.

The psychologist used only for a short period of time the primary reinforcement to try to model the mother although he did not liked to use it and found the social reinforcement worth with this child.

In the last five weeks, the psychologist, the integration teacher, the two children and three younger children, began to work with him in an open place. The child began to run and play in the woods among the pine trees. He learned not to hurt young children as he did before and

began to cooperate and interact very quickly with all other children. Many exercises of pronounciation, psychomotricity, precision and hand grasp were done. At last he was able to hang from a tree branch by his hands and play on the slide 3 metres high which he feared some weeks before.

If the psychologist had to continue with this child, it would be possible for the child to attend a normal pre-school with the help of an integration teacher, backed by a behavior modification therapist or psychologist. The parents, the teachers and the other children could be modelled to behave with this child in a different way. This would drop completely the costs of education of such handicapped children raising at the same time their ability to learn new skills, to behave properly and to be useful and productive to the society they belong to.

Socially speaking, this seems to be a good solution not only because many people -parents, teachers, fellowmates- learn something worth about handicaps, but also because the handicapped is not isolated in a special school where he might feel segregated

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REFERENCES

NORONHA, Z. and NORONHA, M. - PORTUGAL, integration or special schools? Information paper presented at the International Cerebral Pausy Society Seminar, held at the University College, Oxford, England, from 28th March until 2nd April 1976. 15 pgs - mimeographed - March 1976.

NORONHA, Z. and NORONHA M. - INTEGRAÇÃO: um ano de experiência - lecturing aid por primary school teachers. 15 pgs - mimeographed - 1976 b.

NORONHA, M. and NORONHA, Z. - Podem os pais ajudar a educar os seus filhos autistas? - 1977 - PARQUE, nº 7, July, pg. 9.

NORONHA, M. - Modificação do comportamento: uma experiencia com alcoólicos reincidentes - 1977 b - HOSPITALIDADE, nº 161, Oct-Dec,

NORONHA, M. - Deficiencia e condicionamento operante - 1978 - HOSPITALIDADE, nº 162, Jan-Mar.

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